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March 2017

Product Guide Specification for StaticWorx EC Rubber Floor Tile

Specifier Notes:

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings.

Delete all "Specifier Notes" when editing this section.

SECTION 09650 RESILIENT FLOORING

PART 1 GENERAL

1.1 SUMMARY

Specifier Notes: EDIT LIST BELOW. REFER TO PART 2 - PRODUCTS FOR ESD PROTECTION (ELECTRONIC DISCHARGE PROTECTION) ALSO INCLUDED, ETC.

- A. The work of this Section includes:
 - 1. Rubber tile flooring.
 - 2. Subfloor preparation.

- B. Related Sections: Other Specification Sections which directly relate to the work of this Section include, but are not limited to, the following:
 - 1. Section 03300 - Cast-In-Place Concrete; concrete substrate; slab surface tolerances; vapor barrier for applications on or below grade; 90 degree riser and tread edge angle for stair tread and nosings.
 - 2. Section 06100 - Rough Carpentry; plywood substrate; surface tolerances.
 - 3. Section 10270 - Access Flooring; resilient floor covering for access panels.

- C. References (Industry Standards)
 - 1. American Society for Testing and Materials (ASTM)
 - A. ASTM E 648 Standard test method for critical radiant flux of floor covering systems using a radiant heat energy source.
 - B. ASTM E 662 Standard test method for specific optical density of smoke generated by solid materials.
 - C. ASTM E 84 Standard test method for surface burning characteristics of building materials.
 - D. ASTM D 3389 Standard test method for coated fabrics abrasion resistance (rotary platform, double-head abrader).

E. ASTM D 2047	Standard test method for static coefficient of friction of polish-coated floor surfaces as measured by the James Machine.
F. ASTM F 1344	Standard specification for rubber floor tile.
G. ASTM 1860	Standard specification for rubber sheet floor covering with backing.
H. ASTM 1859	Standard specification for rubber sheet floor covering without backing.
I. ASTM F 2169	Standard specification for resilient stair treads.
J. ASTM F 1861	Standard specification for resilient wall base.
K. ASTM F 710	Standard practice for preparing concrete floors to receive resilient flooring.
L. ASTM F 150	Standard test method for electrical resistance of conductive and static dissipative resilient flooring.
M. ASTM F 2170	Standard test method for determining relative humidity in concrete floor slabs using in situ probes.
N. ASTM F 1869	Standard test method for measuring moisture vapor emission rate of concrete subfloor using anhydrous calcium chloride.
O. FTM 4046 101	Static decay.
P. ESD STM 97.2	Floor materials and footwear voltage measurement in combination with a person.
Q. ESD S7.1-2005	Resistive characterization of flooring materials.
R. ESD STM 97.1	Floor materials and footwear resistance in combination with a person.

2. National Fire Protection Association (NFPA)

- A. NFPA 253 Test method for critical radiant flux of floor covering systems using a radiant energy source.
- B. NFPA 258 Test method for specific density of smoke generated by solid materials.

1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, installation instructions, and maintenance recommendations for each material proposed for use.
- B. Samples: Submit two 6 by 6 inch (15 by 15 cm) verification samples of each type of product specified in color selected for use.
- C. MSDS (Material Safety Data Sheets) are available for adhesives.

1.03 QUALITY ASSURANCE

- A. Manufacturer: Provide resilient flooring manufactured by a firm with a minimum of 10 years experience with resilient flooring of types equivalent to those specified. Manufacturers proposed for use, which are not named in this Section, shall submit evidence of ability to meet performance requirements specified not less than 10 days prior to bid date.
 1. Color Matching: Provide resilient flooring products, including wall base and accessories, from one manufacturer to ensure color matching.
 2. Manufacturer capable of providing field service representation.

- B. Installers Qualifications: Installer experienced (minimum of 3 years) to perform work of this section who has specialized in the installation of work similar to that required for this project and who is acceptable to the product manufacturer. List of flooring contractors is available on request, call 1-617-923-2000.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in labeled packages. Store and handle in strict compliance with manufacturer's recommendations. Protect from damage due to weather, excessive temperatures, and construction operations.
- B. Deliver materials sufficiently in advance of installation to condition materials to room temperature prior to installation.

1.05 PROJECT CONDITIONS

Maintain a temperature of 68 degrees F (20 degrees C) plus or minus 5 degrees F (3 degrees C) in spaces to receive resilient flooring. Specified temperature shall be maintained at least 48 hours before, during, and 48 hours after installation.

1.06 WARRANTY

- A. Provide manufacturer's standard one-year warranty against defects in manufacturing and workmanship of resilient flooring products. Provide manufacturer's standard limited wear warranty/conductivity warranty as specified under each product as applicable.

1.07 EXTRA MATERIALS

- A. Furnish full size units equal to 2 percent of quantity of resilient flooring installed as extra materials. Properly label and package extra materials. Deliver to Owner's designated storage area.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

- A. Provide resilient flooring by **StaticWorx, Inc. – StaticWorx EC Rubber Tile Flooring**, PO Box 1556, Williston, VT 05495, Phone: (617) 923-2000, FAX: (617) 467-5871.

2.02 RESILIENT TILE FLOORING

NTS: SELECT 2.02C ESD TILE FOR ELECTRONIC MANUFACTURING WHERE HEAVY ROLLING LOADS ARE USED

- B. Rubber Tile for ESD Protection Control: Extra Heavy Traffic
 1. Product Name: **StaticWorx EC Rubber**, static conductive per ANSI/ESD S7.1-2013, smooth surface, vulcanized two layer construction, 2.0 mm overall thickness, 24 inches by 24 inches tile size.
 2. Material: Rubber with abundant natural fillers and environmentally compatible color pigments. Rubber content approximately 31%.
 3. Back of Tile: Flat back, double sanded.
 4. Limited Wear Warranty/Conductivity Warranty: 10 year wear; Lifetime conductivity.

5. Standard: ASTM F 1344, for through-mottled tiles as applicable.
6. Abrasion Resistance: Taber abrasion test, ASTM D 3389, H-18 wheel, 500 gram load, 1000 cycles, gram weight loss not greater .50.
7. Hardness ASTM D 2240, Shore A, greater than 81.
8. Slip Resistance: Static coefficient of friction (James Test): ASTM D 2047, equal to or greater than 0.6, ADA guidelines compliance.
9. Asbestos-Free: Products shall contain no asbestos.
10. Flammability: ASTM E 648; NFPA 253; NBSIR 75 950 result to be not less than 0.45 watts per square centimeter, Class 1.
11. Smoke Density: ASTM E 662, NFPA 258, NBS smoke density, less than 450.
12. Burn Resistance: Cigarette and solder burn resistance.
13. Halogen-Free: Products shall contain no halogens.
14. PVC-Free: Products shall contain no poly-vinyl-chloride.
15. Conductivity: $\leq 1.0 \times 10^6$ resistance to ground when tested according to ASTM F 150/ESD.S7.1-2013 under >30% relative humidity at room temperature.
16. Decay Time: <.025 seconds when tested according to FTM 4046 101.
17. Static Generation: <20 volts when tested according to ESD STM 97.2.
18. System resistance: < 3.5×10^7 ohms when tested according to ANSI/ESD S97.1-12006. Floor Materials and Footwear Resistance in Combination with a Person. Meets recommended range of ANSI/ESD S20.20-2014
19. Color: As selected

C. Rubber Tile for Access Floor Panels: ACCESS FLOOR PANELS

NTS: SELECT 2.02C FOR TILE FOR ACCESS FLOOR PANELS
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1. Product Name: **StaticWorx EC Rubber**, smooth surface, vulcanized two layer construction, static conductive per ANSI/ESD S7.1-2005, tile size 24 inches by 24 inches, characteristics as specified under D.
2. Color: As selected.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify that spaces to receive resilient flooring are suitable for installation. Do not proceed with work until unsatisfactory conditions are corrected. Comply with manufacturer's recommendations including the following:
 1. Substrates shall be dry and clean.
 2. Substrates shall be free of depressions, raised areas, or other defects which would telegraph through installed flooring.
 3. Temperature of resilient flooring and substrate shall be within specified tolerances.

4. Moisture condition and adhesive bond tests shall be performed as specified.
- B. For applications on concrete, verify curing, hardening, or breaking compounds have not been used. If there are any, do not proceed until compounds have been removed as specified.
- C. For applications on concrete slab on grade or below grade, verify vapor barrier/retarder below slab was installed. If no vapor barrier was installed, do not proceed with work unless written acceptance of such conditions is received and submitted.
- D. Perform moisture condition test in each major area, minimum 1 per 1,000 square feet, prior to installation. Moisture condition shall not exceed 3 pounds per 1,000 square feet per 24 hour day, in accordance with ASTM F 1869. Do not proceed with work until results of moisture condition tests are acceptable.
- E. Perform adhesive bond test in each major area, minimum 1 per 1,000 square feet, prior to installation. Examine after 72 hours to determine whether bond is solid and no moisture is present. Do not proceed with work until results of bond test are acceptable.
- F. Attach one copper ground connection as follows: minimum one copper ground strip per 1000 square feet.

3.02 PREPARATION

- A. Comply with ASTM F 710 and manufacturer's recommendations for surface preparation. Remove substances incompatible with resilient flooring adhesive by method acceptable to manufacturer.
 - a. Concrete floors with steel troweled (slick) finish shall be properly roughened up (sanded) to ensure suitable adhesion.
 - b. Concrete floors with curing, hardening, and breaking compounds shall be abraded with mechanical methods only to remove compounds. Use blastrac or similar equipment.
- B. Fill voids, cracks, and depressions with trowel-applied leveling compounds acceptable to manufacturer. Remove projections and repair other defects to tolerances acceptable to manufacturer.
- C. Vacuum subfloors immediately prior to installation to remove loose particles.

3.03 INSTALLATION

- A. Install resilient flooring in accordance with manufacturer's printed installation instructions. Comply with the following:
 1. Layout resilient flooring to provide equal size at perimeter. Adjust layout as necessary to eliminate resilient flooring which is cut to less than half full width.
 2. Lay resilient flooring with arrows in the same direction.
 3. Install resilient flooring without cracks or voids at seams. Lay seams together without stress. Remove excess adhesive immediately.
 4. Scribe resilient flooring neatly at perimeter and obstructions.
 5. Extend resilient flooring into reveals, closets, and similar openings.
 6. Install reducer strips at exposed edges.
 7. Do not mix manufacturing batches of a color within the same area.
 8. Do not install resilient flooring over building expansion joints.
 9. Do not install defective or damaged resilient flooring.

3.04 CLEANING AND PROTECTION

- A. Touch-up and repair minor damage to eliminate all evidence of repair. Remove and replace work which cannot be satisfactorily repaired.
- B. Clean surfaces only after adhesive has fully cured, no sooner than 72 hours after installation. Clean surfaces using non-abrasive materials and methods recommended by manufacturer. Remove and replace work that cannot be successfully cleaned.
- C. Protect completed work from damage and construction operations and inspect immediately before final acceptance of project.

END OF SECTION-